

REMARKS

This is in response to the Office Action dated September 8, 2006. In view of the foregoing amendments and following representations, reconsideration is respectfully requested.

By the above amendment, claim 21 has been amended; claim 22 has been canceled; and claims 39-40 are newly presented. Thus, claims 21 and 23-40 are currently pending in the present application. Of the pending claims, it is noted that claims 31-37 were allowed in the previous Office Action.

On page 3-6 of the Office Action, claims 21, 23-30 and 38 are rejected as follows:

Claims 21, 23-30 and 38 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Silzer, Jr. (Pub. No.: US 2004/0001022) in view of Dosch (Patent No. 6,587,698); and

Claims 28-30 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Silzer, Jr. (Pub. No.: US 2004/0001022) in view of Dosch (Patent No. 6,587,698) as applied to claim 21, above, and further in view of Yagi (Pub. No.: 2003/0184494).

It is submitted that the present invention, as embodied by independent claim 21, is now clearly allowable over the prior art of record for the following reasons.

Claim 21 has been amended to further define the projection portion as being "configured to project from said housing at an obtuse angle thereto." This arrangement is clearly shown, for example, in Figs. 17B and 18. As will be demonstrated below, claim 21, as amended, now clearly distinguishes over the disclosed Silzer communication apparatuses, taken alone or in combination with the teachings of Dosch

and Yagi.

Silzer discloses a communication apparatus having a projection that is configured and arranged to project from the housing at an acute angle. If at least one part of the antenna element was mounted in at least one of an inner part and a surface of the Silzer projection portion, the following problems would occur. The effects will be described below with reference to Figs. C1 to C3.

Fig. C1
(Dipole
Antenna)

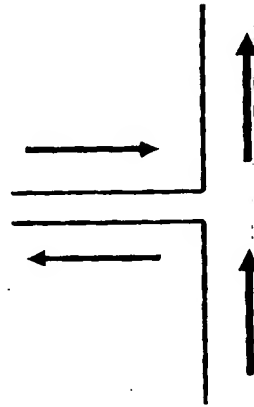


Fig. C2
(Present
Invention)

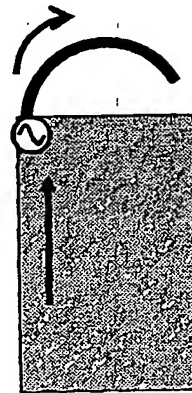


Fig. C3
(Silzer)

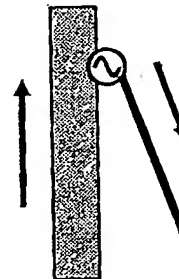


Fig. C1 is presented to show the fundamental principal of a dipole antenna. As shown in Fig. C1, since the direction of the current flow in the signal line is opposite to the direction of the current flow in the grounding in the transmission feeding line, the radio wave propagates on the transmission feeding line without projection thereof. However, folding of an open end of the transmission feeding line leads to a situation in which the directions of the currents are in parallel, and thus the radio wave can be projected to free space. In this case, a standing wave is caused corresponding to the length of the antenna element, and this leads to a determination of the resonance frequency.

Fig. C2, which is illustrative of the present invention, the projection portion of the boom portion is arranged so that the antenna extends and projects in the longitudinal direction. This leads to a situation in which the direction of the current flowing on the boom portion becomes substantially parallel to the direction of the current flowing in the grounding conductor of the housing. Accordingly, the radio wave can be projected to free space in a manner similar to that shown in Fig. C1. Thus, maximum current flows in the vicinity of the feeding point, and substantially no current flows at an open end of the boom antenna. Therefore, even though the direction of the open end of the boom antenna is directed downward, cancellation of the current will be negligible.

Fig. C3 is illustrative of the Silzer apparatus, shown Fig. 5B and Fig. 6E, if an antennae portion were incorporated into the Silzer projection portion. As clearly shown in Figs 5B and 6E, an acute angle is formed between the housing and the projection portion. Thus, the direction of the current flowing in the projection portion would be

almost opposite to the current flowing in the grounding conductor of the housing. This would create a situation in which substantially no projection of the radio wave is achieved. As a result, the projection efficiency of the antenna apparatus would be reduced.

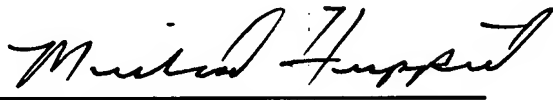
In summary, Silzer discloses a mobile telephone including a projection that does not include any portion of an antenna incorporated on or in the projection portion. Therefore, Silzer is constructed without any consideration of the directional characteristic of an antenna apparatus provided in a projection portion. Clearly, if the antenna element were to be arranged in the projection portion of Silzer, desirable antenna characteristics could not be obtained. Thus, Silzer, clearly does not meet each and every limitation of claim 21, nor would it have been obvious to incorporate the antenna element in the Silzer projection portion as it would clearly not produce desirable antenna characteristics.

In view of the above, it is submitted that the present application is now clearly in condition for allowance. The Examiner therefore is requested to pass this case to issue.

In the event that the Examiner has any comments or suggestions of a nature necessary to place this case in condition for allowance, then the Examiner is requested to contact Applicant's undersigned attorney by telephone to promptly resolve any remaining matters.

Respectfully submitted,

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